



Introduction to Lensometry Hands - On Workshop

Learning Objectives

1. Attendees will review the Parts of a manual lensmeter
2. Attendees will review the Anatomy of a manual lensmeter
3. Attendees will learn proper technique to calibrate the lensmeter
4. Attendees will preform manual lensometry on loose spherical lenses
5. Attendees will preform manual lensometry on loose cylindrical lenses
6. Attendees will will preform neutralization of finished spectacles including Single Vision and Bifocals

Parts of a Manual Lensmeter and Anatomy

- Eyepiece
- Lens holder
- Lens Marker
- Lens Table
- Power Drum
- Inclination Control
- Axis Wheel
- Reticle
- Sphere Lines
- Cylinder Lines



Calibrating the lensmeter

- With the lensmeter off, turn eye piece all the way to the right.
- Turn the power wheel to +10.00 and Axis wheel to 180
- Look inside lensometer and focus on the reticle, turn the eye piece to the right until the reticle looks sharp and clear stop be sure you do not go back and forth
- When you think reticle is focused begin to turn power wheel in minus direction until both sphere and cylinder are in focus,
- Check power wheel it should read zero if not continue back to step one, if at zero you are ready to neutralize

Single Vision Lenses - Spherical

- Turn the power wheel to +10.00
- Turn Axis wheel to 180
- Start with the right eye center lens holder and stabilize using lens table
- Begin to move power wheel in minus direction stop when both sphere and cylinder become clear
- Record power and move to left eye

Single Vision Lenses - Cylinders

- Turn the power wheel to +10.00
- Turn Axis wheel to 180
- Start with the right eye center lens holder and stabilize using lens table
- Begin to move power wheel in minus direction stop at the brightest spot
- Turn axis wheel until a set of lines become sharp
- Turn back to +10.00
- Move power wheel in minus direction stop at first set of lines
- Refine axis
- Recheck by going back to +10.00
- Confirm sphere lines are first, record power and continue in minus direction until cylinder are in focus
- Record Sphere Power, determine how far you traveled from sphere to cylinder power and record amount of change, record axis, move to left eye and repeat

Bifocal Lenses - Neutralize Distance

- Turn the power wheel to +10.00
- Turn Axis wheel to 180
- Start with the right eye center lens holder and stabilize using lens table
- Begin to move power wheel in minus direction stop at the brightest spot
- Turn axis wheel until a set of lines become sharp
- Turn back to +10.00
- Move power wheel in minus direction stop at first set of lines
- Refine axis
- Recheck by going back to +10.00
- Confirm sphere lines are first, record power and continue in minus direction until cylinder are in focus
- Record Sphere Power, determine how far you traveled from sphere to cylinder power and record amount of change, record axis, move to left eye and repeat

Bifocal Lenses - Determining the Add Power

- Place the spectacles are concave side facing you (temples facing towards you)
- Locate the sphere power in the top segment using methods
- Move to segment find sphere lines

- Determine the amount you traveled from sphere in distance to sphere in segment and record add power
- Repeat for left eye

Progressive Addition Lenses

- Locate and mark the major reference points on a progressive lens using manufacture cut out chart
- Locate the distance portion and neutralize
- Move to left eye repeat
- Move to PRP to determine the amount of vertical prism present in OD
- Move to PRP to determine the amount of vertical prism present in OS
- Compare right and left eye and determine imbalance
- Locate the Add marking on the lens, and confirm add power